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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,913

03/21/2007

Gunter Uhl

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23598 7590 12/29/2009
BOYLE FREDRICKSON S.C.
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EXAMINER

BERHANU, SAMUEL

ART UNIT

PAPER NUMBER

2858

NOTIFICATION DATE

DELIVERY MODE

12/29/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@boylefred.com

Office Action Summary	Application No.		Applicant(s)	
	10/597,913		UHL, GUNTER	
	Examiner		Art Unit	
	SAMUEL BERHANU		2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3

- 10597913 - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-23 and 26-39 is/are rejected.
- 7) ☒ Claim(s) 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/29/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 08/29/2006 is considered by the examiner.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim 27 is objected to because of the following informalities:
5. Claim 27 depends on itself. It is improper for a claim to depend on itself.. For examination purpose it is assumed that claim 27 is dependent on claim 22. Appropriate correction is required.

6. Misnumbered claims 35-39 have been renumbered 34-38. Appropriate correction is required.

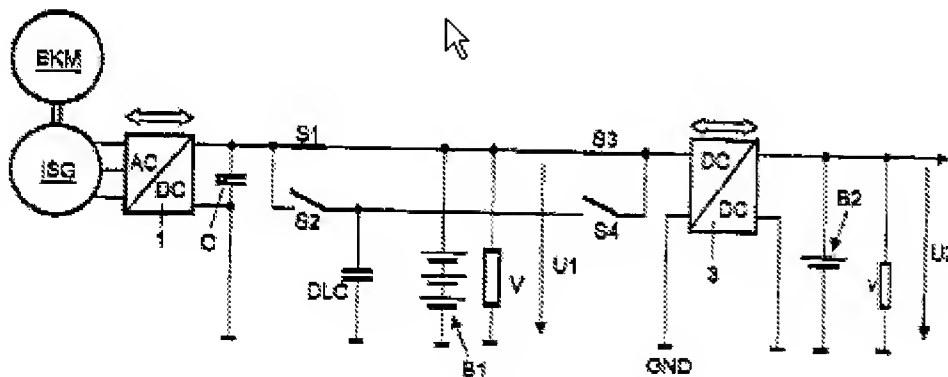
Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 20-23, 26, 31 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Bolz et. al. (US 6,919,648) (hereinafter Bolz).



As to claims 20 and 31, Bolz discloses in figures 1-5 (see figure above), a motor vehicle electrical system, comprising:

a generator [ISG], a battery [B1], a starter and a high-capacity capacitor [DLC] for storing electric energy for the starting process of a motor vehicle engine [figure2],

a voltage transformer [DC/DC] and an interrupter [S1, S2] which are connected in parallel between the capacitor and the battery [see figure above] and which are

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controlled for preparing a starting process of the motor vehicle engine in such a way that the voltage transformer transforms the voltage (UBatt) of the battery into a larger voltage [column 3, lines 58-61] and the interrupter interrupts the electrical connection between the battery and the capacity [column 8, lines 11-15].

As to claim 21, Bolz discloses, wherein the voltage (UBatt) of the battery in a charged state is within the range of approximately 12.5 V and the voltage transformer increases the voltage (UBatt) of the battery by several volts to preferably approximately 16 V [see column 1, lines 16-30, column 2, lines 4-10].

As to claim 22, Bolz discloses in figure above, a control unit for activating the voltage transformer and for opening the interrupter [column 8, lines 11-15].

As to Claim 23, Bolz discloses in figure above, wherein the control unit effects an activation of the voltage transformer and an opening of the interrupter for a short time prior to the start of the starting process of the motor vehicle engine for charging the capacitor [Column 10, lines 5-19].

As to claim 26, Bolz discloses in figure above, wherein the control unit activates the voltage transformer and opens the interrupter in dependence on the detection of the position of the ignition key [column 10, lines 5-19].

As to claim 37, Bolz discloses in figure above, wherein the battery is electrically connected to the generator as soon as the motor vehicle engine runs by itself [column 8, lines 11-15].

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 27-30, 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolz in view of Amano et. al. (US 6,861,767)(hereinafter Amano)

As to claims 27, Bolz does not disclose explicitly, wherein the control unit activates the voltage transformer and opens the interrupter upon the detection of the ignition key position "ignition ON".

Amano discloses wherein the control unit activates the voltage transformer and opens the interrupter upon the detection of the ignition key position "ignition ON".
[see abstract].

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify Bolz's apparatus and charging/discharging controlling means when engine is started in order to increase battery life.

As to claim 28, Bolz in combination with Amano disclose, wherein the control unit deactivates the voltage transformer while the interrupter is open, as soon as the starting process of the motor vehicle engine is initiated.

As to claim 29, Bolz in combination with Amano disclose, wherein the control unit closes the interrupter as soon as the starting process was successfully terminated.

As to claim 30, Bolz in combination with Amano disclose wherein the control unit monitors the voltage of the generator and closes the interrupter in dependence on the voltage level of the generator.

As to claim 36, Bolz in combination with Amano disclose, wherein the transformation of the voltage of the battery to higher value is terminated as soon as the starter is activated.

As to claim 38, Bolz in combination with Amano disclose, detecting, in dependence on the voltage level of the generator, whether the motor vehicle engine runs by itself.

11. Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolz in view of Nagai et.al. (US 2004/0085189) (hereinafter Nagai)

As to claim 32, Bolz does not disclose, wherein an open state of a vehicle door is detected for detecting an imminent starting process.

Nagai discloses wherein an open state of a vehicle door is detected for detecting an imminent starting process [see paragraphs 0070-0071].

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify Bolz's apparatus and add vehicle door detecting means as taught by Nagai in order to reduce risk of battery discharge , when the vehicle is left parked for a long period of time.

As to claim 33, Bolz in combination with Hirotaka disclose, wherein an open state of the driver's door is detected.

As to claim 34, Bolz in combination with Nagai disclose, wherein the position of the ignition key is detected for detecting an imminent starting process.

As to claim 35, Bolz in combination with Nagai disclose, wherein the ignition key position "ignition ON" is detected.

As to claims 31-38 the method steps will be met during the normal operation of the apparatus described above.

Allowable Subject Matter

12. Claims 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:-

For claim 24: primarily, the prior art of record does not disclose or suggest in the claimed combination: wherein the control unit activates the voltage transformer and opens the interrupter in dependence on the detection of an open state of a vehicle door.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMUEL BERHANU whose telephone number is (571)272-8430. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on 571-272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samuel Berhanu/

Examiner, Art Unit 2858

/Patrick J Assouad/

Supervisory Patent Examiner, Art Unit 2858